



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,339	04/10/2006	Kazuhiro Furuta	007324-0315886	1522
909	7590	03/03/2011		EXAMINER
PILLSBURY WINTHROP SHAW PITTMAN, LLP				KHAN, OMER S
P.O. BOX 10500			ART UNIT	PAPER NUMBER
MCLEAN, VA 22102			2612	
			NOTIFICATION DATE	DELIVERY MODE
			03/03/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket\_ip@pillsburylaw.com  
margaret.drosos@pillsburylaw.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/532,339	FURUTA, KAZUHIRO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Omer S. Khan	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 February 2010.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1 and 3-6 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1 and 3-6 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date. _____ .	6) <input type="checkbox"/> Other: _____ .

### **DETAILED ACTION**

1. This communication is in response to amendments filed on 02/09/2010.
2. In the application claims 1 and 3-6 remain pending. Claim 2 is cancelled.
3. Applicant's arguments with respect to claims 1 have been considered but are moot in view of the new ground(s) of rejection.
4. Applicant's arguments with respect to claims 3 have been considered but are not persuasive.
5. With respect to claim 3, Applicant argues that Nakazawa and Ying fail to disclose "the communication control unit sets the priority sequence of the electrical apparatus whose operation state has been changed latest to lowest and so that the priority sequence becomes higher as the time of change of the operation state goes back farther." Applicant argues that it is improper to combine the references. Second, Applicant argues that Ying discloses that power utility 202 may be able to control dynamically the total consumer power demand, and thus reduce peak customer power consumption when necessary to avert a power crisis. To this end, Ying specifically teaches that power control circuit 112 receives power control commands from central station 102 to selectively block power - power control circuit 222 does not control power control or set priority sequence - it simply interprets the power control commands from central station 102. (See, Ying column 7, lines 10-29). Moreover, although Ying indicates that an initial priority scheme and an initial timing function may be programmed by the user (see, Ying column 10, lines 46-50), there is simply nothing in Ying that remotely contemplates that the communication control unit itself sets the

priority sequence of the electrical apparatus whose operation state has been changed latest to lowest and so that the priority sequence becomes higher as the time of change of the operation state goes back farther, as required by claim 3.

6. Examiner disagrees that the combination is improper because Nakazawa discloses the terminal unit 200 also comprises a microcomputer 30, which controls the entire operation of the terminal unit 200, generates a signal for controlling the connected electrical apparatus, and detects the state of the electrical apparatus to generate a signal for reporting the state to the host unit 100, See col. 10, l. 46-51. Nakazawa discusses when the terminal unit 200 is connected to the electrical apparatus applicable to the system; PC terminal is used to keep constant a voltage level inside the terminal unit 200. Nakazawa system comprises fire hazard sensor, i.e. circuit breaker; therefore, the system is capable of shutting down apparatus if the apparatus is drawing too much current. Nakazawa does not teach a priority sequence. In analogous art, Ying discloses a power management system and associated method therefore includes a plurality of local wireless energy control units at remote sites for controlling power delivery to customer loads, and a central station with a wireless transmitter for broadcasting commands to the wireless energy control units. Therefore, it would have been obvious for Nakazawa to adapt technique from Ying and make sure that the system should shutdown the power in the priority sequence and shutdown the most valuable and most hazardous equipment first.

7. Examiner disagrees that Nakazawa and Ying fail to disclose the abovementioned claimed limitation. The support for the argued limitation can be found in the specification ¶ 107 of the PG pub: the lowest priority may be given to the electrical apparatus whose operation state has been changed latest. The priority sequence may be rendered higher regarding the electrical apparatus in which the time when the operation state was changed goes back to the past. It is Examiner's interpretation that the highest priority is given to the appliance that was turned on first and the lowest priority is given to the appliances turned on last and to maintain steady current power consumption the last appliance is turn off first. Applicant admits Ying indicates that an initial priority scheme and an initial timing function may be programmed by the user (see, Ying column 10, lines 46-50). The wireless energy control units each comprise a bank of switches for controlling power delivery to electrical loads at each local site. Each wireless energy control unit are pre-configured so as to specify the order or priority in which electrical loads are disengaged, in response to commands to reduce power consumption received from the central station. The central station may issue power reduction commands according to different priority levels or alert stages. See Ying, incorporates prior art U.S. Pat. No. 4,216,384 by reference and wherein the various main power lines of the installation or site are monitored for energy usage, and a control circuit selectively disconnects loads when the total energy being drawn at the installation or site exceeds a specified maximum, **See abstract, col. 3 l. 51-55.** Therefore, it is Examiner's interpretation that the control circuit can selectively shutdown the elements during the sequence of shutdown process. If one can show a process or a queue wherein the last

on has the lowest priority in the priority queue. It would be obvious for Ying to implement such process into the shut down sequence and give lowest priority to the elements entering last to the priority queue. In an analogous art, Seitz teaches a fluid heater with improved heating elements controller wherein when there is no flow of water, to prevent elements from burning, shutdown would occur and the elements would be deactivated. In some control schemes, shutdown would be affected by the sequential deactivation of the heating means, by first shutting down the last heating element to be activated, col. 2 l. 27-34. The ground of rejection has been changes and Applicant's argument is moot in view of the new ground of rejection.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazawa in US 6297746 and further in view of Murcko in US 6218787.

Consider claim 1, Nakazawa an electrical apparatus operation state control system for controlling an operation state of an electrical apparatus operated by an operation unit which is operated by a user for switching an operation state, See Fig 1 and abstract. The system comprising communication control unit 6/30/200 which is

disposed between the electrical apparatus and an operating power supply 400 for the electrical apparatus; an operation state switching unit 40 which is disposed at the electrical apparatus for switching an operation state of the electrical apparatus independent of operation in the operation unit, **See col. 18 I. 53-64** and the operation state switching unit is rendered operable via the communication control unit when a remotely-operated terminal 16 executes an over-the-horizon wireless communication with the communication control unit.

Nakazawa disclosed a system for controlling a plurality of electrical appliances, i.e. TV, Lighting lamp, VCR, etc, via radio communication a terminal unit 200 registered in the host unit 100 and each terminal unit is disposed for each of the plurality of electrical apparatuses. The terminal unit controls the corresponding electrical apparatus based on a control signal from the host unit, and detects the state of the electrical apparatus to report it to the host unit, **See abstract, col. 8 I. 39-67.**

The apparatus power supply control device comprises a switch section for switching conducting and non-conducting of a power supply path between a predetermined operation power supply and the control object or electrical apparatus, a switch controller for controlling the switch section, and a detector for detecting a conducting or non-conducting state of the power supply path, **See col. 6 I. 30-36.**

The terminal unit 200 also comprises a microcomputer 30, which controls the entire operation of the terminal unit 200, generates a signal for controlling the connected

electrical apparatus, and detects the state of the electrical apparatus to generate a signal for reporting the state to the host unit 100, **col. 10, l. 46-51.**

The desk lamp and the electric stove in FIG. 1 can be plugged into a power supply control unit 400, which also comprises a terminal plug-in section 40 to which the terminal unit 200 can be connected. The power supply control unit 400 is controlled by radio communication performed between the connected terminal unit 200 and the host unit 100, **See col. 11 l. 46-53.**

The microcontroller 30 can detect the state of the electrical apparatus to generate a signal for reporting the state to the host unit 100, and the vibration sensor 60 detects the vibration of a predetermined strength or more, a vibration detection report is transmitted to the host unit 100, host can take the appropriate action, and activate the power in stages, to prevent the confusion at the time of refuge the host unit transmits the ID code to the terminal unit 200, **See col. 18 l. 53-64.**

Nakazawa does not explicitly teach wherein the electrical apparatus is arranged so that an operation state thereof is changeable into a power-off stage and plurality of power-on stages, The support for this limitation was found in ¶ 104 of the PG pub: when the apparatus to be controlled has a plurality of operation states in the case where power is supplied to the apparatus, as the lighting apparatus 29 in the third embodiment, the power supply does not always need to be turned off. The operation state may be changed so that an amount of consumed current becomes smaller. It is Examiner's interpretation that Nakazawa does not explicitly teach a lighting system with

a Potentiometer that provides different dimming levels of lighting and thus draw power at different levels. In an analogous art, Murcko teaches One effective way to reduce energy consumption of lighting is to use dimmable fluorescent lighting systems. The dimming control unit 180 allows lighting controller 14 to be active. The functions include the ability: to turn off the power to the controlled devices; to provide a plurality of different dimming levels by replacing the variable resistor 64 (FIG. 3) with a digitally-controlled potentiometer such as the Model No. DS1804 semiconductor manufactured by Dallas Semiconductor; to sense whether the devices are actually drawing power; and to determine how much power the devices are drawing. It should be obvious that the controlled ballast itself forms a typical device for which power status monitoring is useful, See col. 8 line 50+.

It would have been obvious to an ordinary skilled artisan at the time of invention to modify the invention above and include a digital potentiometer thus reduce power consumption if the appliance is drawing too much current; therefore, preventing electrical fire and saving the end user on the energy cost.

10. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazawa by US 6297746, and further in view of Ying in US 6861956, and further in view of Seitz in US 6080971.

11. Because of multiple dependency claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazawa in US 6297746 and further in view of Murcko in US 6218787, in view of Ying in US 6861956, and further in view of Seitz in US 6080971.

With respect to claim 3, Nakazawa discloses a detecting unit which detects the operation state of the electrical apparatus and informs the detected operation state to the communication control unit; and an informing unit which informs the transmitted detection result to a remote operation terminal, **See Nakazawa col. 5 I. 13- 18 and col. 10, I. 46-51.**

Nakazawa in view of Ying disclose the detecting units are disposed on a plurality of electrical apparatuses for detecting a state of consumed power for each of the electrical apparatuses and the communication control unit is controls the state of consumed power for each of the electrical apparatuses, and when a sum total of the state of consumed power informed by the detecting units exceeds an upper limit value, the communication control unit controls so that the consumed power is reduced from the electrical apparatus with a lower priority sequence or stops the operation of the electrical apparatus so that the sum total is limited within an upper limit power, Nakazawa discusses when the terminal unit 200 is connected to the electrical apparatus applicable to the system; PC terminal is used to keep constant a voltage level inside the terminal unit 200. Nakazawa system comprises fire hazard sensor, i.e. circuit breaker; therefore, the system is capable of shutting down apparatus if the apparatus is drawing too much current. Nakazawa does not teach a priority sequence.

In analogous art, Ying discloses a power management system and associated method therefore includes a plurality of local wireless energy control units at remote sites for controlling power delivery to customer loads, and a central station with a wireless transmitter for broadcasting commands to the wireless energy control units.

The wireless energy control units each comprise a bank of switches for controlling power delivery to electrical loads at each local site. Each wireless energy control unit is capable of being pre-configured so as to specify the order or priority in which electrical loads are disengaged, in response to commands to reduce power consumption received from the central station. The central station may issue power reduction commands according to different priority levels or alert stages. See Ying, incorporates prior art U.S. Pat. No. 4,216,384 by reference and wherein the various main power lines of the installation or site are monitored for energy usage, and a control circuit selectively disconnects loads when the total energy being drawn at the installation or site exceeds a specified maximum, **See abstract, col. 3 I. 51-55.**

It would have been obvious to an ordinary skilled artisan at the time of invention to modify the invention of Nakazawa and include a power management system; therefore, increase the efficiency of the overall system by implementing a cost effective power management system of Ying versus other power management systems available at the time of invention, **See abstract, col. 3 I. 51-55.**

Ying discloses the communication control unit sets the priority sequence of the electrical apparatus whose operation state has been changed latest to lowest and so that the priority sequence becomes higher as the time of change of the operation state goes back farther. **See Ying, col. 5 I. 55-61, col. 15 I. 1-8, the collective operation of the local energy control units at their various remote locations, a substantial overall power reduction can be realized, particularly, for example, at times of peak power demand. Power utility 102 may be able to control dynamically the total**

**customer power demand, and thus reduce peak customer power consumption when necessary to avert a power crisis. By providing multiple alert stage levels, such a power management technique allows some granularity in selecting the amount of customer power to be reduced, and places the minimal burden necessary on the customers.**

It is Examiner's interpretation that Ying does not Explicitly teaches, "the electrical apparatus whose operation state has been changed latest to lowest and so that the priority sequence becomes higher as the time of change of the operation state goes back farther." However, if one can show a process or a queue wherein the last on has the lowest priority in the priority queue. In an analogous art, Seitz teaches a fluid heater with improved heating elements controller wherein when there is no flow of water, to prevent elements from burning, shutdown would occur and the elements would be deactivated. In some control schemes, shutdown would be affected by the sequential deactivation of the heating means, by first shutting down the last heating element to be activated, col. 2 l. 27-34. The ground of rejection has been changes and Applicant's argument is moot in view of the new ground of rejection.

It would have been obvious to an ordinary skilled artisan at the time of invention to modify the invention above and have Ying to implement such process into the shut down sequence and give lowest priority to the elements entering last to the priority queue thus preventing the heating elements of the appliance from burning out and preventing electrical fire.

Consider claim 4, the electrical apparatus operation state control system according to any one of claims 1 and 3, wherein the operation state switching unit is composed as automatic operation means for automatically operating the operation means of the electrical apparatus, **See col. 5 l. 5-7 where he discusses the power supply of the necessary electrical apparatus can automatically be controlled in response to the environment change.**

Consider claim 5, The electrical apparatus operation state control system according to and one of claims 1 and 3, further comprising a power supply state informing unit provided at the electrical apparatus to indicate whether the electrical apparatus is connected to a power supply, **col. 10, l. 46-51.**

Consider claim 6, The electrical apparatus operation state control system according to any one of claims 1 and 3, wherein the communication control means and the remote operated terminal are communicable via a public communication line, **See col. 9 l. 4. The frequency band is near 400 MHz, i.e. unlicensed public band.**

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omer S. Khan whose telephone number is (571)270-5146. The examiner can normally be reached on M-F 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian A. Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Omer S Khan/  
Examiner, Art Unit 2612

/Brian A Zimmerman/  
Supervisory Patent Examiner, Art Unit 2612